Massive leiomyosarcoma of the spermatic cord

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CITATION:

Taue, Ryuichi ...[et al]. Massive leiomyosarcoma of the spermatic cord. 泌尿器科紀要 2007, 53(7): 497-500

ISSUE DATE:

2007-07

URL:

http://hdl.handle.net/2433/71440

MASSIVE LEIOMYOSARCOMA OF THE SPERMATIC CORD

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A 56-year-old man was diagnosed with a right testicular tumor. Orchiectomy with high ligation of the spermatic cord was performed. Histological examination revealed leiomyosarcoma of the spermatic cord. Distant metastases were not found. The patient was treated with adjuvant radiation therapy to control the disease, since a high incidence of local recurrence has been reported. The patient had no evidence of disease 24 months postoperatively.

(Hinyokika Kiyo **53** : 497–500, 2007)

Key words : Leiomyosarcoma, Spermatic cord, Adjuvant radiation therapy

INTRODUCTION

Sarcomas of the spermatic cord are rare. Most of the available data regarding these tumors are derived from small series or case reports. Several reports have indicated that local recurrence following curative resection is common, and that salvage therapy for relapsing tumors is rather unsuccessful. We report a patient with a massive leiomyosarcoma of the spermatic cord that had invaded surrounding tissue, which we treated by orchiectomy and local adjuvant radiotherapy.

CASE REPORT

A 56-year-old man was admitted to our hospital with a 6 month history of a rapidly enlarging mass in the right scrotum. He had begun to notice scrotal swelling 7 years earlier, but had not sought treatment. The mass was fixed in the scrotum to the inguinal region ; it was approximately the size of a child's head (Fig. 1). The firm consistency and heterogeneous visualization of the mass on enhanced computed tomography (CT) suggested a malignant tumor (Fig. 2). Laboratory examinations, including testicular tumor markers, were normal. Pelvic and abdominal CT revealed no metastases. Based on these data, a testicular tumor was diagnosed, and a right high orchiectomy was done. Macroscopically, the testis appeared to be normal, but the tumor had invaded the fascia of the adductor muscle of the thigh, the rectus abdominis muscle, and the pubic bone. We resected the mass with the fascia and restored the defect with a mesh plug. The tumor clustered around the spermatic cord, and the total volume of solid mass was approximately 1,700 g (Fig. 3). Microscopically, elongated cells with central nuclei, arranged in fascicles, were observed. Immnohistochemical staining was strongly positive for smooth muscle actin and desmin. The tumor was diagnosed as a leiomyosarcoma of the spermatic cord (Fig. 4). The surgical margins of the spermatic cord were positive. We had planned to treat the patient with radiation therapy or systemic chemotherapy postoperatively, but chemotherapy was contraindicated due to his poor cardiac status. Thus, the patient was treated with local adjuvant radiotherapy with a total dose of 50 Gy to the ipsilateral inguinal region and scrotum. Although the patient suffered moderate radiotherapy-induced skin erosion in the inguinal region, there was no evidence of disease 24 months postoperatively.

Fig. 1. The huge mass is fixed in the right scrotum to the inguinal region, and the penis is displaced laterally.

DISCUSSION

According to the generally accepted principles of sarcoma therapy, radical orchiectomy and resection of tumor with negative microscopic margins are important components of the management of spermatic cord sarcoma[1]. However, a sarcoma occurring in this anatomical region is rarely amenable to wide excision, and the resected margins are almost invariably close. Thus, local recurrence is a major problem. Some series have reported that the postoperative local recurrence rate is as high as 50%[2]. Ballo et al. noted that the actuarial local recurrence rate after surgery alone was 30% at 10 years and 42% at 15 years[1].

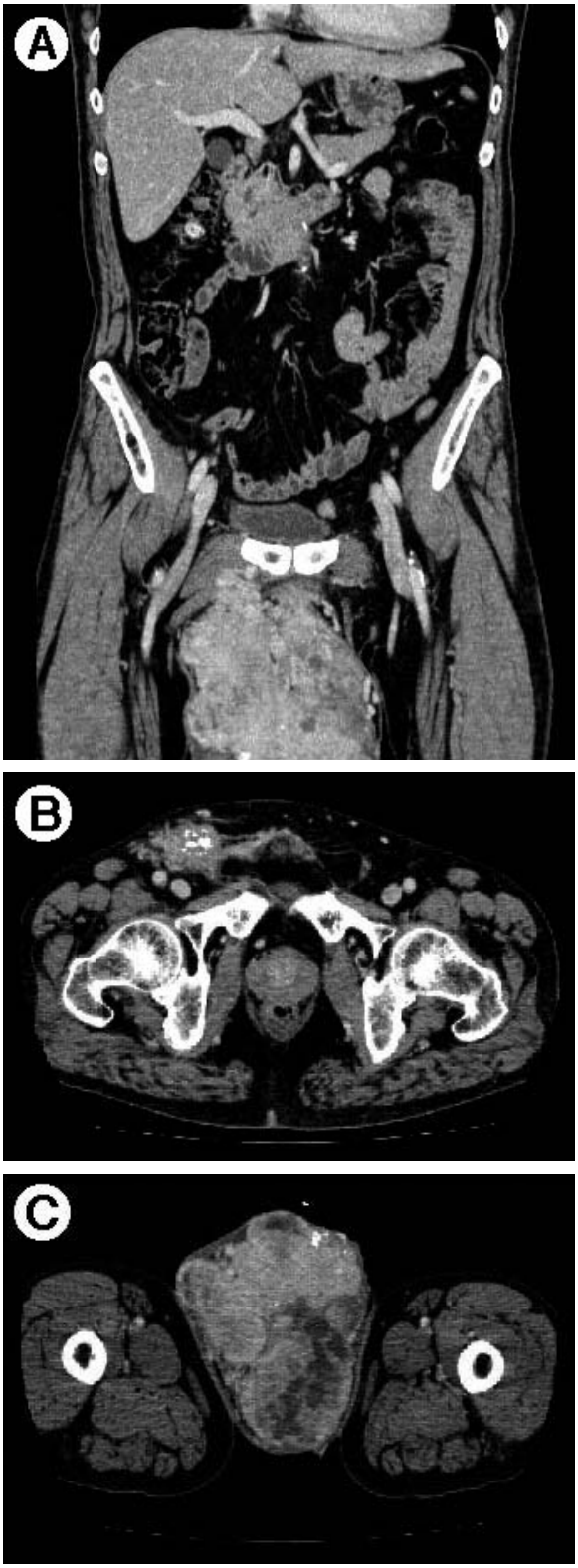

Fig. 2. Enhanced computed tomography shows a huge mass with heterogeneous enhancement in the right scrotum; the mass was connected superficially to the right inguinal region.

Radiotherapy is an effective adjunct to surgery for soft tissue sarcomas located in other sites[2,3]. Recently, some reports have recommended radiation therapy for spermatic cord sarcoma[1,4–7]. Ballo et al. stated that a

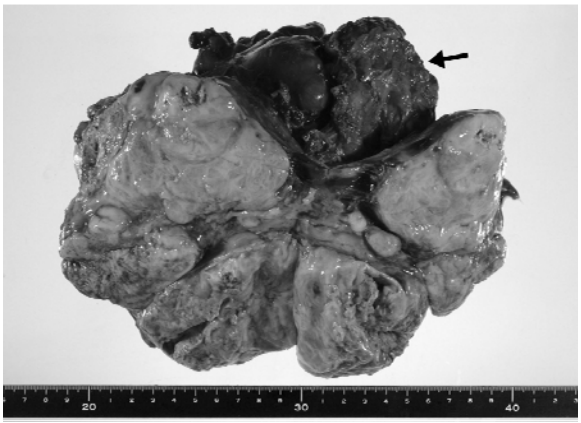

Fig. 3. Gross section of the resected specimen. Multiple ball-like tumors are gathered around the spermatic cord. The cut-surface of the mass was white, and the total volume was 1,700 g. The tumor is separated from the testis (arrow).

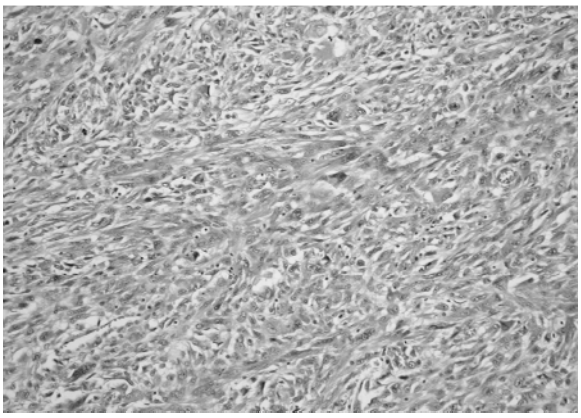

Fig. 4. Microscopic appearance of the tumor. The tumor consists of elongated cells with central nuclei, arranged in fascicles (× 200; H & E stain).

combination of surgery and radiation therapy was the most likely strategy to reduce the high rate of local recurrence[1]. In the literature, there are several reports of low recurrence rates among patients treated with both surgery and radiation. Fagundes et al. reported that 5 out of 9 patients treated with surgery alone developed locoregional recurrence, while none of the 9 patients who had adjuvant radiation had relapse[7]. Catton et al. reported that none of 5 patients treated with surgery and radiation had local recurrence[4]. Lindberg reported on the use of radiation therapy as an effective adjunct to surgery for soft tissue sarcomas at other sites[3]. However, Coleman et al. found no significant differences between patients treated with adjunctive radiation and those with surgery alone with respect to patient age, tumor histology, tumor grade or tumor size; they concluded that adjuvant therapy did not result in a significant advantage[2].

To the best of our knowledge, this is the twenty-second case of leiomyosarcoma of the spermatic cord to be reported in Japan. Kitsukawa et al. previously

reported 21 leiomyosarcoma cases in Japan. In that report, patients with a leiomyosarcoma in the scrotum were treated with surgery only or surgery and chemotherapy ; none of the patients received adjuvant radiation therapy[8]. In our case, the histological margins of the removed spermatic cord were positive, and the tumor had invaded the pubic bone, based on the surgical findings. Nevertheless, the patient has had no local recurrence so far. Thus, adjuvant radiation therapy appears to be an effective therapy to prevent local recurrence of residual sarcomas. However, local recurrence has been reported to occur more than 5 years after surgery, we plan to follow the patient closely.

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(Received on November 6, 2006
Accepted on January 26, 2007)

和文抄録

性索の巨大平滑筋肉腫の1例

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中逵　弘能，岸本　大輝，岡　　夏生，福森　知治
高橋　正幸，西谷　真明，金山　博臣
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患者は56歳，男性で，右精巣癌と診断された．右高位精巣摘除術を施行し，病理結果は精索の平滑筋肉腫だった．遠隔転移はなかった．局所再発が高率にみられると報告されていることより局所のコントロールとして追加の放射線療法を施行した．術後18カ月の現在，再発の所見はない．

（泌尿紀要 **53**：497-500，2007）